

ABSTRACT OF THE DISCLOSURE

COMPOUND POLARIZATION BEAM SPLITTERS

5 A compound polarization beam splitter (33) for use with a reflective, polarization-modulating, imaging device (10), e.g., a LCoS device, is provided. The compound PBS has: (a) an input prism (20); (b) an output prism (30), and (c) a polarizer (13), which is located between the two prisms (20,30) and which may be a wire grid polarizer (13a) or a multi-layer reflective polarizer (13b). Polarized illumination light (11) enters the input prism (20) through a first
10 surface (21) and undergoes total internal reflection at a second surface (22) before being reflected from the polarizer (13) and polarization-modulated at the imaging device (10). The polarizer's tilt angle (β) is less than 45° , which reduces astigmatism and the required back working distance of the system's projection lens (74).